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Natural Resources Conservation Service

Colorado Basin Outlook Report January 1, 2001

Basin Outlook Reports
and
Federal - State - Private
Cooperative Snow Surveys

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How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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COLORADO
WATER SUPPLY OUTLOOK REPORT
JANUARY 1, 2001

Summary

After one of the driest years in recent memory, Colorado's water users are looking forward to a return of surplus water supplies in 2001. January 1 snowpack readings show a slow start to that goal with below average accumulations statewide. However, these conditions remain well ahead of last year's, and certainly within the range of significant improvement by spring. Although last year's dry conditions dropped reservoir levels across the state, the current storage levels remain near average in most basins. Water users will need to maintain a close watch on conditions during the next few months as the major hydrologic component of the water year unfolds.

Snowpack

Data from Colorado's automated SNOTEL sites indicates the state's snowpack is 91% of average on January 1. Although every major basin is reporting below average snowpack readings, they remain only slightly below average, and range from a low of 81% of average in the Rio Grande Basin to a high of 99% of average in the Yampa and White basins. The lowest snowpack readings in the state occur in several basins, which were extremely dry last year. Those include the Huerfano and Purgatorie within the Arkansas Basins, and Alamosa Creek, the Conejos River and Rio Grande headwaters. Colorado's highest snowpack percentages occur in a few small basins in the Colorado River headwaters along with the Arkansas River headwaters. Although this year's snowpack is generally below average, it remains as a stark contrast to last year's. Statewide, the current snowpack is 203% of last year's. All basins are reporting well above last year's snowpack readings, especially across southwestern Colorado. The San Juan, Animas, Dolores, and San Miguel basins top the state in comparison to last year's snowpack. The January 1 readings are 520% of last year's meager snowpack, while in the Rio Grande Basin the current readings are more than four-times last year's. Given these statistics, even a below average snowpack seems acceptable.

Precipitation

Precipitation data collected at Colorado's SNOTEL sites shows slightly below average totals for the first three months of the 2001 water year. The water year began in October with dry conditions recorded across most of the state. The exception being the San Juan, Animas, Dolores, San Miguel, and Rio Grande basins, where well above average precipitation was recorded for the month. November brought below average precipitation statewide, with monthly totals ranging from 63% of average in the Arkansas Basin, to 98% of average in the Yampa, White and North Platte basins. December's precipitation was much more variable, with above average totals measured in the South Platte, Yampa, White and North Platte basins, while only about 50% to 60% of average was measured in the San Juan, Animas, Dolores, San Miguel, and Rio Grande basins. December's statewide precipitation was 87% of average, leaving the current statewide water year totals at 90% of average. In a similar fashion to snowpack percentages, the current precipitation totals remain slightly more than two-times last year's totals.

Reservoir Storage

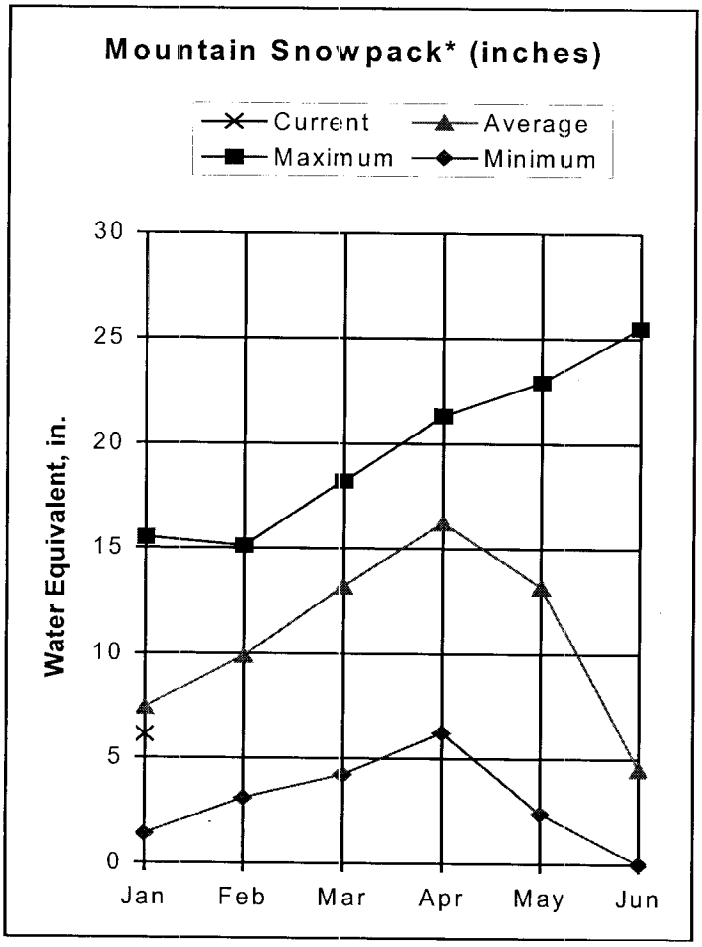
The dry conditions of water year 2000 depleted the surplus reservoir storage the state had enjoyed for the last several years. Fortunately, volumes were not reduced to significantly below the average mark in most basins. Statewide, reservoir storage is 103% of average and is 74% of last year's volumes at this time. The lowest volumes, as a percent of the long-term average, occur in the South Platte Basin, at 87% of average, and in the combined San Juan, Animas, Dolores, and San Miguel basins, at only 77% of average. Meanwhile, the Arkansas Basin continues to lead the state's major basins with 156% of average storage. The current storage volumes remain significantly below last year's storage, and ranges from a low of only 58% of last year's storage in the Arkansas Basin, to a high of 97% of last year's storage in the Yampa River Basin.

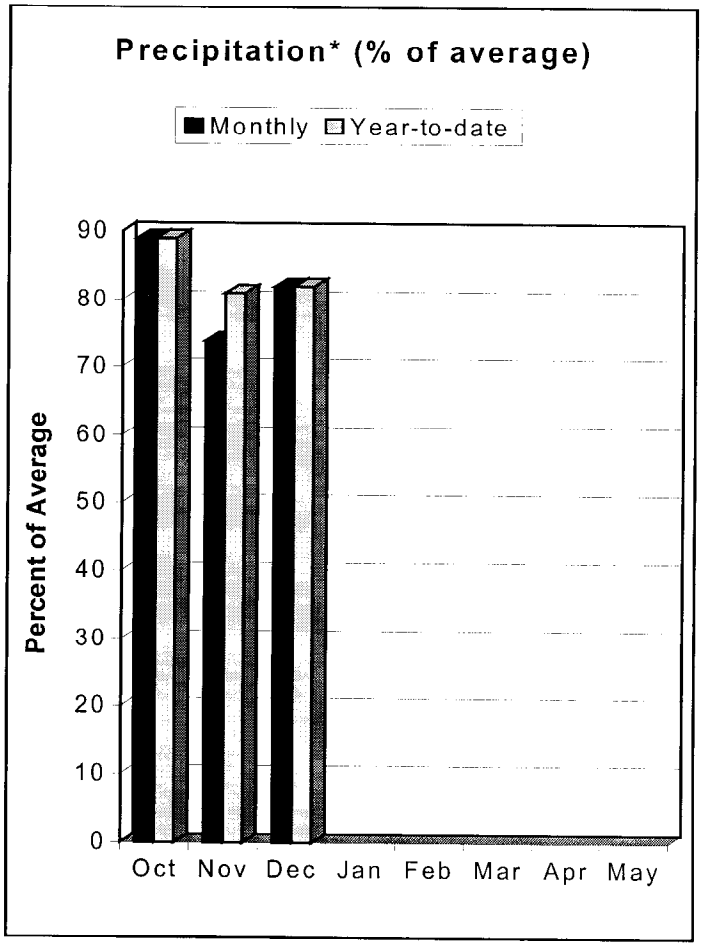
Streamflow

Streamflow forecasts across most of Colorado call for near average streamflows for the 2001 runoff season. Those basins, where below average runoff is forecast, include the Little Snake, North Platte and Saint Vrain and Boulder Creeks across the north. Below average volumes are also forecast along the Roaring Fork, North Fork of the Gunnison, and South Platte headwaters. In southern Colorado, below average runoff is forecast in the southern tributaries of the Arkansas Basin. Volumes in these basins, where below average runoff is forecast, range from 70% to 90% of average. A couple of smaller basins in southern Colorado are forecast to have above average volumes. These include the Mancos and La Plata rivers in southwestern Colorado and the Culebra and Costilla rivers in the Rio Grande Basin. Volumes in these basins range from 110% to 125% of average. Elsewhere across the state, forecasted volumes call for near average volumes which range from 90% to 110% of average.

For Colorado's Surface Water Supply Index (SWSI) map for January 1, 2000 check our web site at:
www.co.nrcs.usda.gov/snow/snow-index.htm

GUNNISON RIVER BASIN
as of January 1, 2001





*Based on selected stations

Snowpack measurements taken at 9 SNOTEL installations throughout the Gunnison Basin indicate that the January 1 snowpack is only 83% of average. Although this is 17% below average, it is a far cry better than last year at this time when there was only about 30% of average snow accumulation in the basin. The snowpack percentage is variable throughout the basin with only 64% of average accumulation in the Surface Creek Watershed, and as much as 94% of average accumulation in the Uncompahgre Watershed. Precipitation was only 82% of average during December, and the water year total is also 82% of average. The combined storage for 8 major reservoirs in the basin is about average for this time of year. There is 12% less storage than last year on January 1. Most of the streamflow forecasts are near average at this time, with the exception of those drainages flowing out of the Grand Mesa area, which are forecasted about 70% to 80% of average.

GUNNISON RIVER BASIN
Streamflow Forecasts - January 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
aylor River blw Taylor Park Resv	APR-JUL	43	68	85	86	102	127	99
late River nr Crested Butte	APR-JUL	41	55	65	84	75	89	77
ast River at Almont	APR-JUL	70	117	150	82	183	230	183
unnison River nr Gunnison	APR-JUL	146	244	310	83	376	474	375
omichi Creek at Sargents	APR-JUL	12.1	22	30	97	38	51	31
ochetopa Creek blw Rock Creek	APR-JUL	8.6	14.5	18.5	110	23	28	16.8
omichi Creek at Gunnison	APR-JUL	24	49	70	91	95	140	77
ake Fork at Gateview	APR-JUL	75	102	120	98	138	165	123
lue Mesa Reservoir Inflow	APR-JUL	283	490	630	90	770	977	699
aonia Reservoir Inflow	MAR-JUN	32	58	80	79	106	150	101
	APR-JUL	28	57	82	79	112	165	104
.F. Gunnison River nr Somerset	APR-JUL	122	179	225	78	276	360	288
urface Creek nr Cedaredge	APR-JUL	6.8	9.5	12.0	75	15.1	21	16.0
idgway Reservoir Inflow	APR-JUL	66	82	95	97	110	137	98
ncompahgre River at Colona	APR-JUL	82	106	125	99	145	177	126
unnison River nr Grand Junction	APR-JUL	607	1020	1300	90	1580	1993	1448

GUNNISON RIVER BASIN
Reservoir Storage (1000 AF) - End of December

eservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
UE MESA	830.0	504.6	589.1	488.0
AWFORD	14.3	3.5	5.5	7.2
UITGROWERS	4.3	1.6	2.2	2.6
UITLAND	9.2	0.0	0.2	1.8
RROW POINT	121.0	107.7	112.8	110.9
ONIA	18.0	2.6	4.4	4.6
DGWAY	83.2	71.0	66.6	68.9
YLOR PARK	106.0	64.1	76.2	64.0

GUNNISON RIVER BASIN
Watershed Snowpack Analysis - January 1, 2001

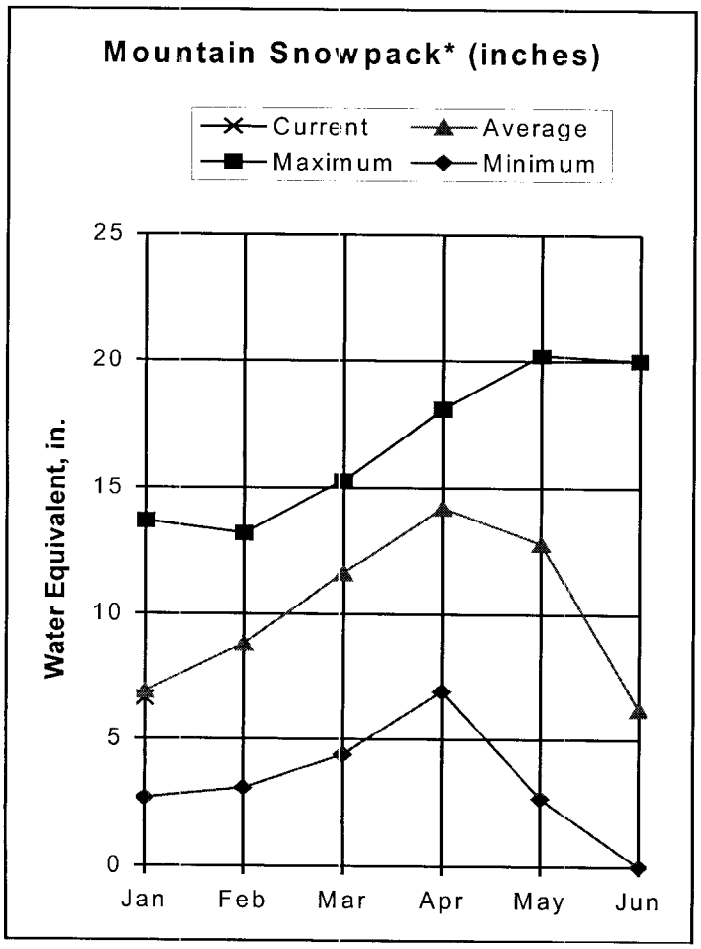
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
UPPER GUNNISON BASIN	9	282	80
SURFACE CREEK BASIN	2	243	64
UNCOMPAHGRE BASIN	3	210	94
TOTAL GUNNISON RIVER BASI	12	259	83

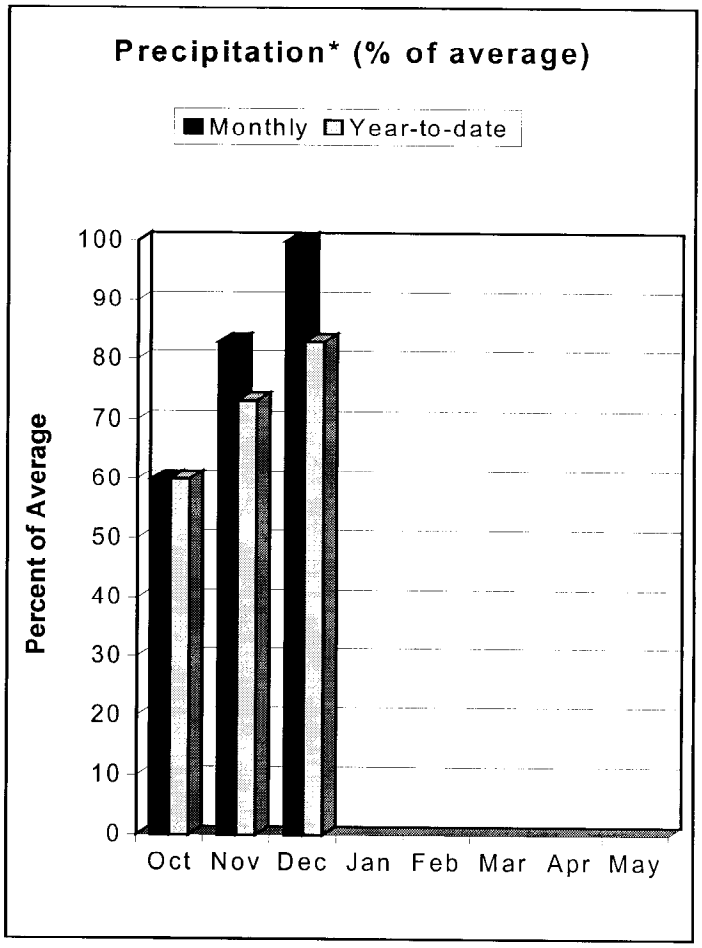
90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

ne average is computed for the 1961-1990 base period.

.) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
!) - The value is natural volume - actual volume may be affected by upstream water management.

UPPER COLORADO RIVER BASIN
as of January 1, 2001





*Based on selected stations

The combined measurements from 25 SNOTEL installations in the Colorado Basin indicate that snowpack accumulation in the Colorado Basin is 95% of average on January 1, which is 87% more snow accumulation than last year at this time. The snowpack percentages are extremely variable throughout the basin ranging from only 64% of average accumulation in the Plateau Creek Basin, to 123% of average accumulation in the Willow Creek Basin. Precipitation in the basin has been gradually improving since the beginning of the water year. Precipitation during December was 100% of average, and the water year total is now 83% of average, which is about 20% of average better than two months ago. The combined storage from 8 major reservoirs in the basin is about 7% above average on January 1, but this is only 84% of the storage amount last year at this time. Early streamflow forecasts are near average for all of the forecast points ranging from 95% of average on the Roaring Fork at Glenwood Springs, to 103% of average flow on the Colorado River near Dotsero.

UPPER COLORADO RIVER BASIN
Streamflow Forecasts - January 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
ake Granby Inflow	APR-JUL	148	185	215	101	250	313	214
illow Creek Reservcir Inflow	APR-JUL	30	41	50	100	60	76	50
illiams Fork Reservoir inflow	APR-JUL	63	78	90	102	103	122	88
.F. Troublesome Creek nr Troublesom	APR-JUL	10.0	15.1	18.5	100	22	27	18.5
illon Reservoir Inflow	APR-JUL	78	121	150	99	179	222	151
reen Mountain Reservoir inflow	APR-JUL	194	226	250	95	275	313	262
uddy Creek blw Wolford Mtn. Resv.	APR-JUL	38	53	65	102	81	110	64
agle River blw Gypsum	APR-JUL	195	252	300	97	357	461	310
olorado River nr Dotsero	APR-JUL	715	1093	1350	99	1607	1985	1362
uedi Reservoir Inflow	APR-JUL	85	107	125	92	146	184	136
oaring Fork at Glenwood Springs	APR-JUL	397	513	600	89	694	845	671
olorado River nr Cameo	APR-JUL	1184	1777	2180	95	2583	3176	2287

UPPER COLORADO RIVER BASIN
Reservoir Storage (1000 AF) - End of December

eservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ILLON	250.8	235.3	235.5	209.7
AKE GRANBY	465.6	339.2	422.5	290.4
REEN MOUNTAIN	139.0	49.7	90.4	88.4
OMESTAKE	43.0	42.1	42.3	25.0
UEDI	102.0	73.7	76.0	79.4
EGA	32.0	8.5	15.7	10.5
ILLIAMS FORK	96.8	59.5	80.9	52.4
ILLOW CREEK	9.0	6.5	4.8	6.0

UPPER COLORADO RIVER BASIN
Watershed Snowpack Analysis - January 1, 2001

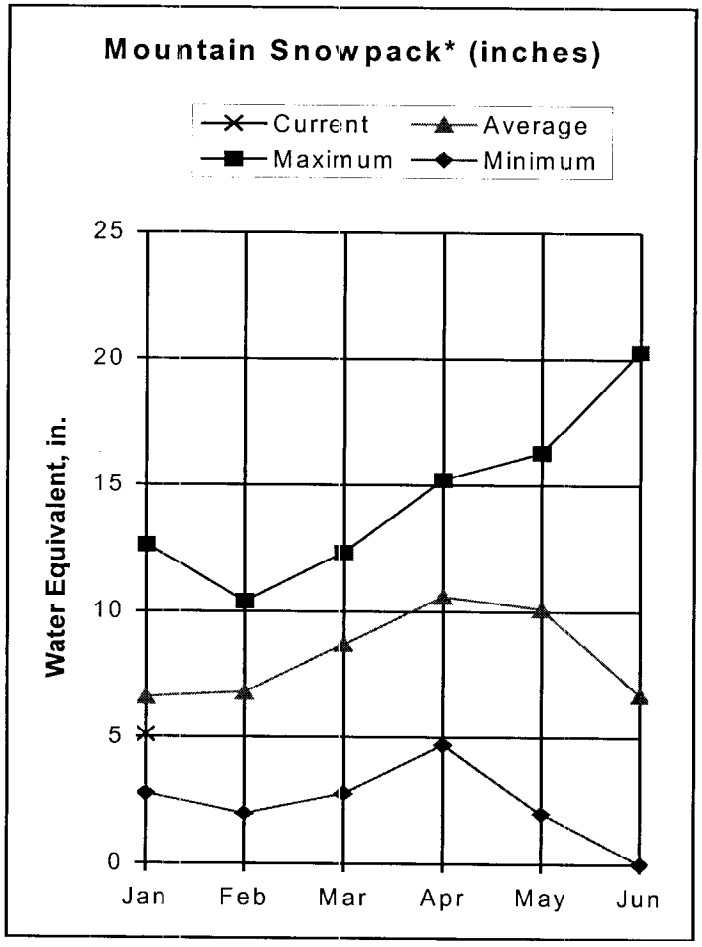
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
BLUE RIVER BASIN	5	177	106
UPPER COLORADO RIVER BASI	16	177	106
MUDDY CREEK BASIN	2	142	117
PLATEAU CREEK BASIN	2	243	64
ROARING FORK BASIN	7	202	86
WILLIAMS FORK BASIN	2	205	109
WILLOW CREEK BASIN	2	175	123
TOTAL COLORADO RIVER BASI	25	187	95

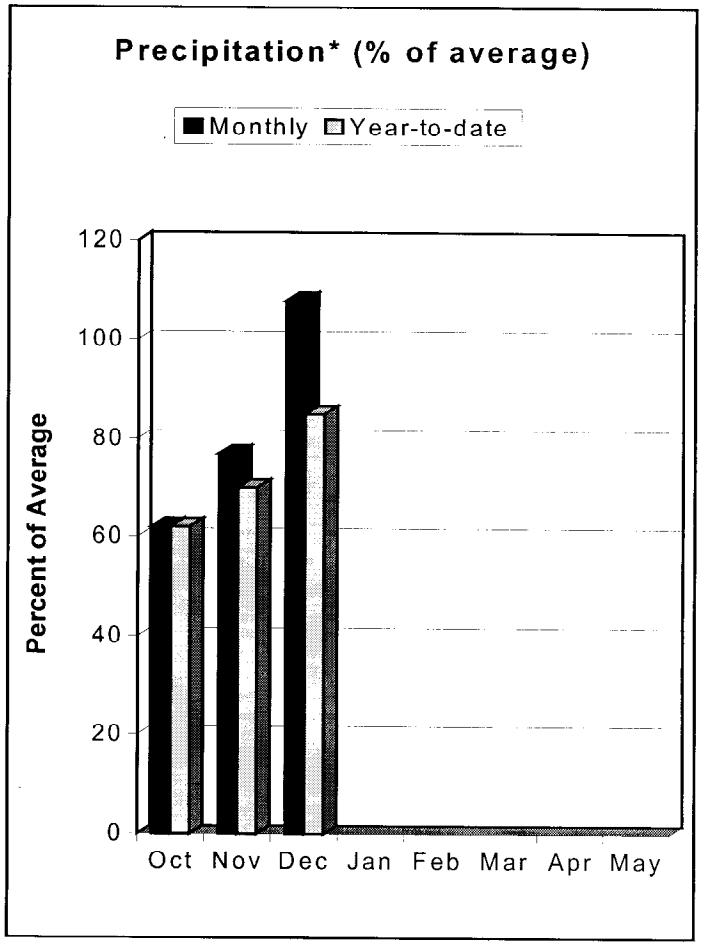
' 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

ie average is computed for the 1961-1990 base period.

.) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
?) - The value is natural volume - actual volume may be affected by upstream water management.

SOUTH PLATTE RIVER BASIN
as of January 1, 2001





*Based on selected stations

Snowpack measurements taken at 16 SNOTEL installations throughout the South Platte Basin indicate that the snowpack is only at 84% of average for January 1. Although the snowpack is 16% below average, it is 36% more snow accumulation than last year at this time. The snowpack percentages are extremely variable between individual watersheds ranging from 104% of average in the Clear Creek Watershed, to only 50 % of average in the Saint Vrain Watershed. The precipitation in the basin has been improving gradually since the beginning of the water year. December precipitation was 108% of average for the month, which has boosted the water year total to 85% of average. The combined reservoir storage for 32 major reservoirs in the basin is only 87% of average, which is only 75% of the storage last year at this time. Most of the streamflow forecasts are below average at this time, but they are highly variable ranging from only 64% of average at the inflow to Antero Reservoir, to 100% of average on Clear Creek at Golden.

SOUTH PLATTE RIVER BASIN
Streamflow Forecasts - January 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
ntero Reservoir inflow	APR-JUL	2.7	5.0	7.5	64	11.3	21	11.7
pinney Mountain Reservoir inflow	APR-JUL	15.0	23	31	82	42	64	38
levenmile Canyon Reservoir inflow	APR-JUL	7.3	21	30	79	39	53	38
neesman Lake inflow	APR-JUL	33	50	66	79	87	130	84
outh Platte River at South Platte	APR-SEP	36	119	175	82	231	314	213
ear Creek at Morrison	APR-SEP	9.3	16.9	22	73	27	35	30
lear Creek at Golden	APR-SEP	89	112	128	100	144	167	128
t. Vrain Creek at Lyons	APR-SEP	43	56	65	83	74	88	78
oulder Creek nr Orodell	APR-SEP	29	38	44	85	50	59	52
outh Boulder Creek nr Eldorado Spri	APR-SEP	18.7	33	42	93	51	65	45
ig Thompson River at mouth nr Drake	APR-SEP	71	87	97	85	107	123	114
ache La Poudre at Canyon Mouth	APR-SEP	105	187	265	93	343	458	284

SOUTH PLATTE RIVER BASIN
Reservoir Storage (1000 AF) - End of December

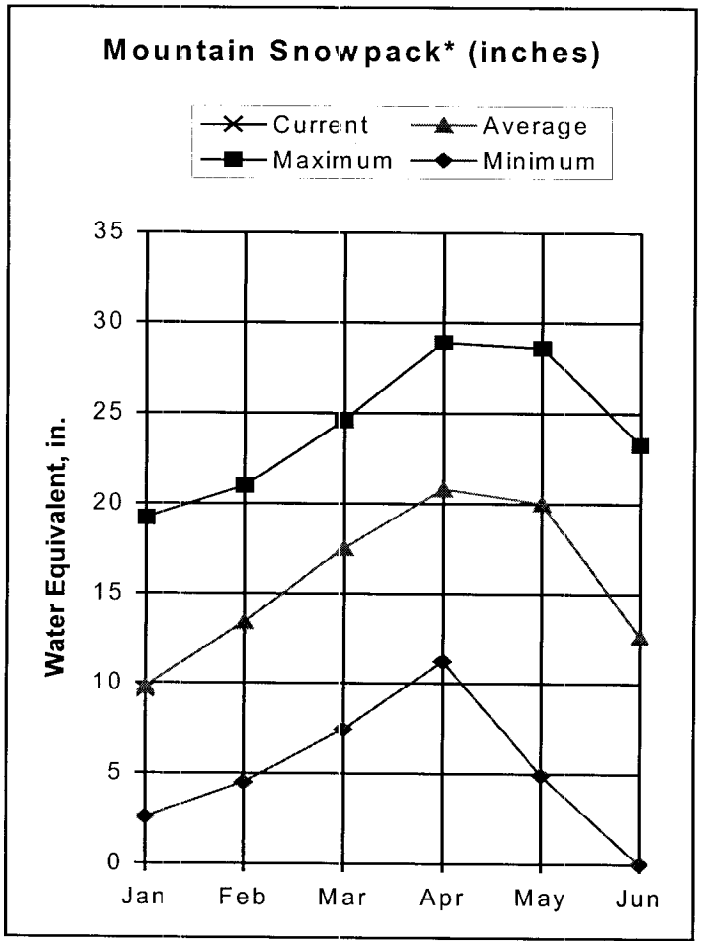
eservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
NTERO	20.0	19.9	20.0	15.0
RR LAKE	32.0	26.0	24.7	19.5
LACK HOLLOW	8.0	2.6	3.0	4.0
OYD LAKE	49.0	22.4	43.0	33.3
ACHE LA POUDRE	10.0	3.3	7.0	6.6
RTER	108.9	68.5	61.5	71.4
AMBERS LAKE	9.0	2.5	5.0	2.8
EESMAN	79.0	45.8	57.5	56.7
OBB LAKE	34.0	8.9	18.0	13.8
LEVEN MILE	97.8	99.7	100.0	91.0
MPIRE	38.0	28.5	27.5	20.3
OSSIL CREEK	12.0	7.6	9.0	5.8
ROSS	41.8	26.0	39.5	26.5
ALLIGAN	6.4	4.9	6.0	3.2
ORSECREEK	16.0	11.0	13.0	10.8
ORSETOOTH	149.7	9.2	109.4	76.9
ACKSON	35.0	21.2	11.4	25.5
JLESBURG	28.0	14.6	15.1	19.6
AKE LOVELAND	14.0	9.3	10.9	9.2
ONE TREE	9.0	7.4	7.1	5.9
ARIANO	6.0	3.7	4.6	4.3
ARSHALL	10.0	5.5	7.0	4.0
ARSTON	13.0	1.7	10.0	6.9
ILTON	24.0	16.2	18.6	13.4
OINT OF ROCKS	70.0	33.3	65.8	49.7
REWITT	33.0	17.8	15.4	16.5
VERSIDE	63.1	46.7	33.7	35.7
PINNEY MOUNTAIN	48.7	19.7	41.8	36.5
RANDLEY	42.0	32.1	40.0	24.0
ERRY LAKE	8.0	5.3	5.5	4.9
ITION	13.0	8.4	11.8	10.3
NDSOR	19.0	8.5	12.0	9.4

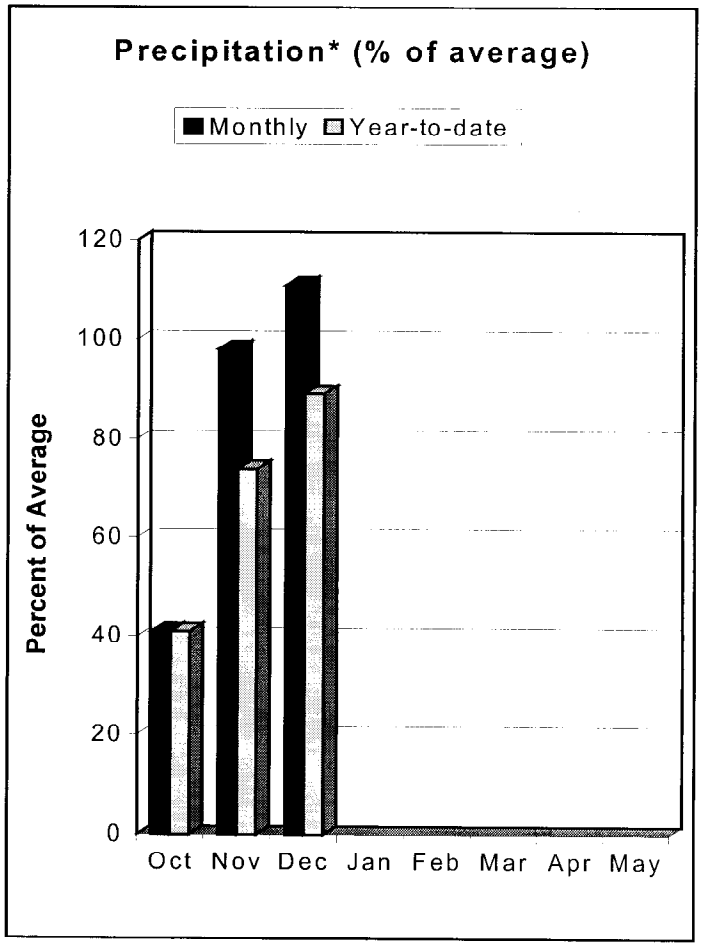
SOUTH PLATTE RIVER BASIN
Watershed Snowpack Analysis - January 1, 2001

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
BIG THOMPSON BASIN	3	161	102
BOULDER CREEK BASIN	3	131	79
CACHE LA POUDRE BASIN	2	151	85
CLEAR CREEK BASIN	2	151	104
SAINT VRAIN BASIN	1	79	50
UPPER SOUTH PLATTE BASIN	6	123	75
TOTAL SOUTH PLATTE BASIN	16	136	84

90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.
ie average is computed for the 1961-1990 base period.
1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
:) - The value is natural volume - actual volume may be affected by upstream water management.

YAMPA, WHITE, NORTH PLATTE AND LARAMIE RIVER BASINS
as of January 1, 2001





*Based on selected stations

These basins in the north central portion of Colorado have some of the highest snowpack percentages in the State. The combined measurements from 5 SNOTEL sites in the North Platte Basin measure snowpack at 90% of average on January 1. Measurements from the 12 SNOTEL sites in the Yampa and White basins are measuring 99% of average accumulation. The distribution of the snow accumulation is relatively uniform throughout these basins only ranging from a low of 90% of average in the Elk River Watershed, to 100% of average in the Yampa Watershed. Precipitation in these basins during December was 111% of average, but the water year total is only 89% of average. The combined reservoir storage in these basins is at 107% of average, which is about the same as last year at this time. Early forecasts are calling for near average volumes at most of the forecasted streamflow points this runoff season. Forecasts range from only 82% of average on the Laramie River near Woods, to 106% of average at Fortification Creek near Fortification.

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS
Streamflow Forecasts - January 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
orth Platte River nr Northgate	APR-SEP	99	186	245	90	304	391	271
aramie River nr Woods	APR-SEP	40	82	110	82	138	180	135
ampa R abv Stagecoach Res	APR-JUL	18.1	26	32	94	38	46	34
ampa River at Steamboat Springs	APR-JUL	192	247	285	104	323	378	273
lk River nr Milner	APR-JUL	175	245	300	100	360	459	300
lkhead Creek nr Elkhead	APR-JUL	23	32	40	103	50	71	39
LKHEAD CREEK blw Maynard Gulch	APR-JUL	41	55	65	110	75	89	59
ortification Ck nr Fortification	MAR-JUN	4.61	7.23	9.00	106	10.77	13.39	8.50
ampa River nr Maybell	APR-JUL	504	740	900	95	1060	1296	947
ittle Snake River nr Slater	APR-JUL	71	107	135	87	167	220	155
ITTLE SNAKE R nr Dixon	APR-JUL	163	233	280	85	327	397	329
ITTLE SNAKE R nr Lily	APR-JUL	189	261	310	87	359	431	358
nite River nr Meeker	APR-JUL	158	212	260	93	318	429	279

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS
Reservoir Storage (1000 AF) - End of December

eservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
TAGECOACH	33.3	31.0	29.5	28.3
AMCOLO	9.1	5.0	7.8	5.2

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS
Watershed Snowpack Analysis - January 1, 2001

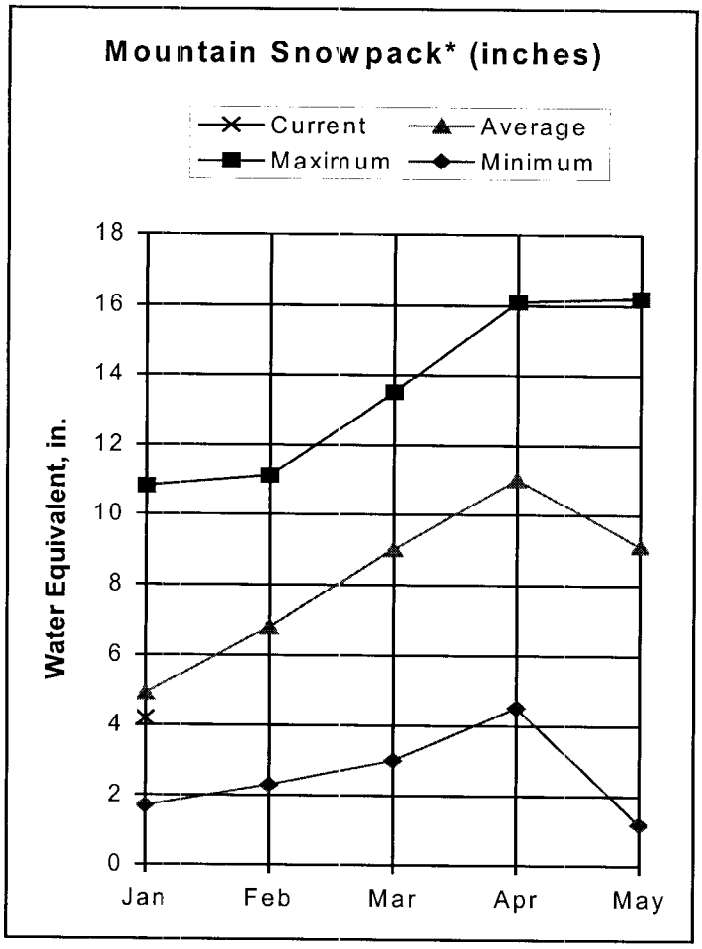
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
LARAMIE RIVER BASIN	2	143	75
NORTH PLATTE RIVER BASIN	3	140	97
TOTAL NORTH PLATTE BASIN	5	141	90
ELK RIVER BASIN	2	162	90
YAMPA RIVER BASIN	9	148	100
WHITE RIVER BASIN	4	166	97
TOTAL YAMPA AND WHITE RIV	12	154	99
LITTLE SNAKE RIVER BASIN	6	131	83

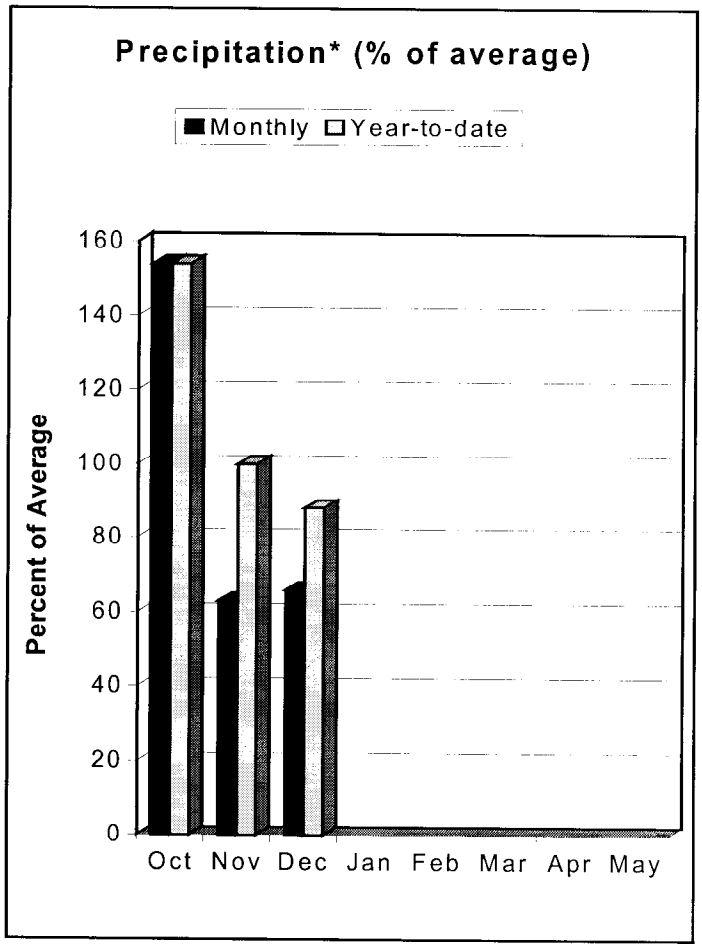
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

ie average is computed for the 1961-1990 base period.

1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
2) - The value is natural volume - actual volume may be affected by upstream water management.

ARKANSAS RIVER BASIN
as of January 1, 2001





*Based on selected stations

The combined measurements from all 5 SNOTEL installations in the Arkansas Basin indicate that the snowpack accumulation is 86% of average on January 1. Snowpack percentages are much higher in the Upper Arkansas Watershed above Salida, which is at 112% of average, while the Purgatoire Watershed is only 70% of average, and the Cucharas and Huerfano watersheds are only 61% of average. Precipitation has been gradually diminishing since the beginning of the water year. Precipitation during December was only 66% of average, which has pulled the water year total down to only 89% of average. Fortunately, reservoirs remain in good shape with combined storage among 12 major reservoirs at 156% of average for this time of year, but this is only 58% of last year's storage level. Most of the streamflow forecasts are below average at this time, ranging from 76% of average on Grape Creek near Westcliffe, to 97% of average on the Arkansas River at Salida.

ARKANSAS RIVER BASIN
Streamflow Forecasts - January 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
halk Creek nr Nathrop	APR-SEP	7.6	18.5	26	90	34	44	29
rkansas River at Salida	APR-SEP	110	217	289	97	361	468	297
rape Creek nr Westcliffe	APR-SEP	6.1	9.7	15.1	76	25	40	20
ueblo Reservoir Inflow	APR-SEP	108	261	364	92	467	620	394
uerfano River nr Redwing	APR-SEP	5.5	9.0	14.0	93	19.0	26	15.0
ucharas River nr La Veta	APR-SEP	4.4	6.8	11.0	85	17.1	26	13.0
rinidad Lake Inflow	APR-SEP	15.0	21	38	88	55	81	43

ARKANSAS RIVER BASIN
Reservoir Storage (1000 AF) - End of December

eservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
OBE		NO REPORT		
EAR CREEK	11.0	4.8	4.3	6.4
REAT PLAINS		NO REPORT		
LBROOK		NO REPORT		
RSE CREEK		NO REPORT		
HN MARTIN	335.7	137.3	332.0	73.4
KE HENRY	8.0	3.0	3.3	3.3
REDITH	42.0	11.5	39.7	9.5
EBLO	236.7	187.5	249.0	125.8
INIDAD	72.3	30.5	65.7	26.4
RQUOISE	126.6	79.2	114.9	56.3
IN LAKES	86.0	45.1	57.9	36.3

ARKANSAS RIVER BASIN
Watershed Snowpack Analysis - January 1, 2001

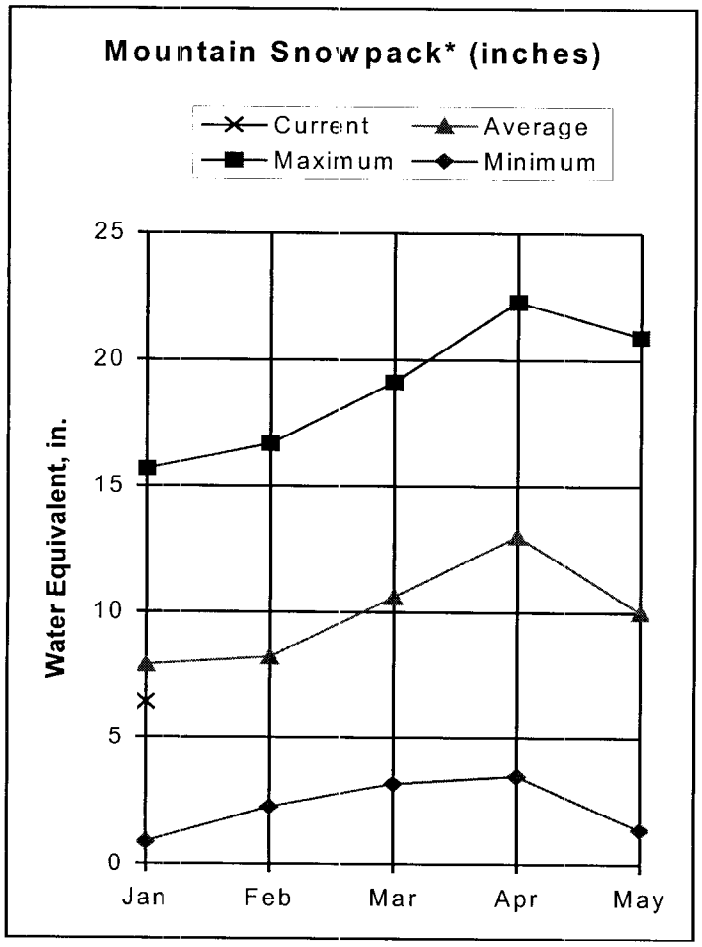
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
UPPER ARKANSAS BASIN	2	178	112
CUCHARAS & HUERFANO RIVER	2	89	61
PURGATOIRE RIVER BASIN	2	87	70
TOTAL ARKANSAS RIVER BASI	5	139	86

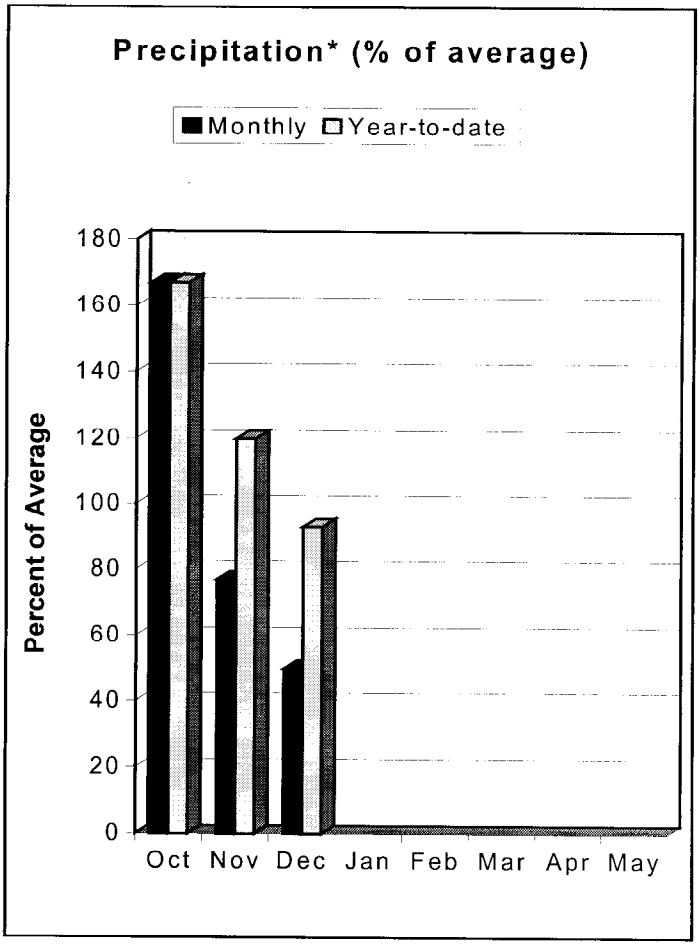
90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

ie average is computed for the 1961-1990 base period.

.) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
:) - The value is natural volume - actual volume may be affected by upstream water management.

UPPER RIO GRANDE RIVER BASIN
as of January 1, 2001





*Based on selected stations

Although snowpack measurements in the Rio Grande Basin had been very promising this season up through November, with much above average accumulations, the extreme lack of snowfall during the later part of December has diminished the snowpack percentage to only 83% of average on January 1. Snowpack percentages range from only 69% of average in the Alamosa Creek Watershed, to 91% of average accumulation in the Upper Rio Grande Watershed. Although the snowpack measurements are 17% below average in the basin, it is over 6 times as much accumulation as last year at this time. Precipitation started well above average early in the water year, but was only 50% of average for December, which has pulled the water year total down to only 93% of average. Reservoir storage is about average for this time of year, but is only 62% of the storage amount last year at this time. Most of the streamflow forecasts are near average at this time. They range from 87% of average on La Jara Creek near Capulin, to 115% of average at the inflow to Costilla Reservoir.

UPPER RIO GRANDE BASIN
Streamflow Forecasts - January 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
io Grande at Thirty Mile Bridge	APR-SEP	82	106	125	94	148	190	133
io Grande Reservoir Inflow	APR-JUL	74	94	110	93	129	163	118
io Grande at Wagon Wheel Gap	APR-SEP	147	241	305	92	369	463	330
outh Fork Rio Grande at South Fork	APR-SEP	71	103	125	95	147	179	132
io Grande nr Del Norte	APR-SEP	212	372	480	92	588	748	520
aguache Creek nr Saguache	APR-SEP	18.6	28	35	103	42	51	34
lamosa Creek abv Terrace Reservoir	APR-SEP	37	54	65	94	76	93	69
a Jara Creek nr Capulin	MAR-JUL	3.01	5.14	7.50	87	9.86	13.33	8.60
rinchera Water Supply	APR-SEP	12.0	17.2	30	100	43	62	30
latoro Reservoir Inflow	APR-JUL	36	49	57	97	66	78	59
	APR-SEP	40	54	63	97	72	86	65
onejos River nr Mogote	APR-SEP	118	167	200	100	233	282	201
an Antonio River at Ortiz	APR-SEP	5.9	11.5	16.5	103	22	33	16.0
os Pinos River nr Ortiz	APR-SEP	37	60	75	104	90	113	72
ulebra Creek at San Luis	APR-SEP	8.8	17.3	23	115	29	37	20
ostilla Reservoir inflow	MAR-JUL	4.94	8.25	10.50	115	12.75	16.06	9.10
ostilla Creek nr Costilla	MAR-JUL	11.6	19.6	25	114	30	38	22

UPPER RIO GRANDE BASIN
Reservoir Storage (1000 AF) - End of December

eservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ONTINENTAL	15.0	3.9	2.9	4.9
ATORO	53.7	13.8	29.3	16.6
O GRANDE	51.0	10.8	2.3	14.0
NCHEZ	103.0	21.2	46.0	16.6
NTA MARIA	45.0	9.5	21.2	8.2
RRACE	13.1	4.2	8.0	5.5

UPPER RIO GRANDE BASIN
Watershed Snowpack Analysis - January 1, 2001

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
ALAMOSA CREEK BASIN	1	800	69
CONEJOS & RIO SAN ANTONIO	2	956	87
CULEBRA & TRINCHERA CREEK	3	130	98
UPPER RIO GRANDE BASIN	3	614	82
TOTAL UPPER RIO GRANDE BA	10	417	83

90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

ie average is computed for the 1961-1990 base period.

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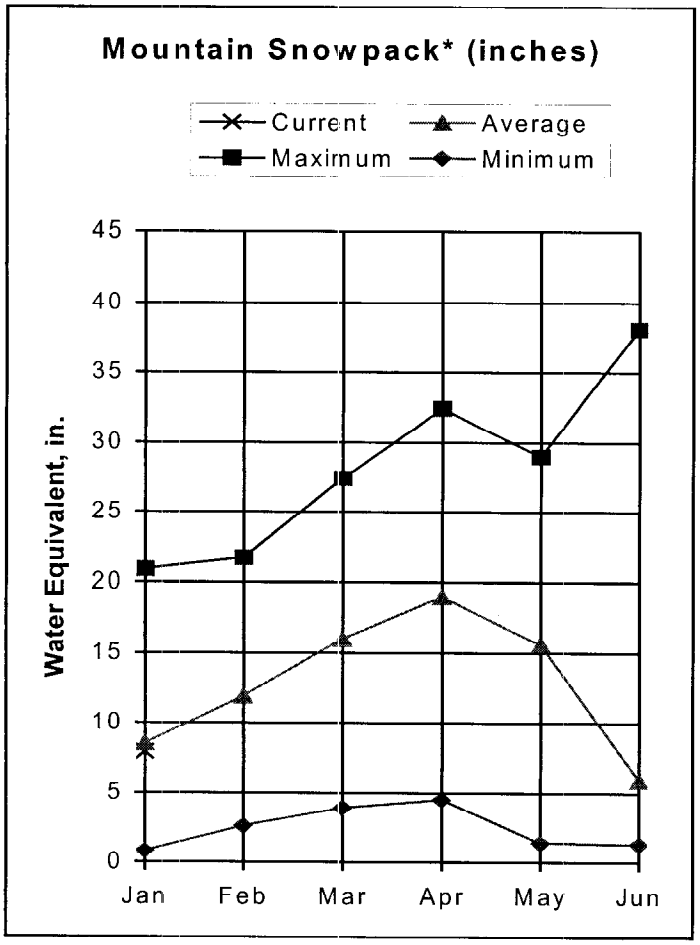
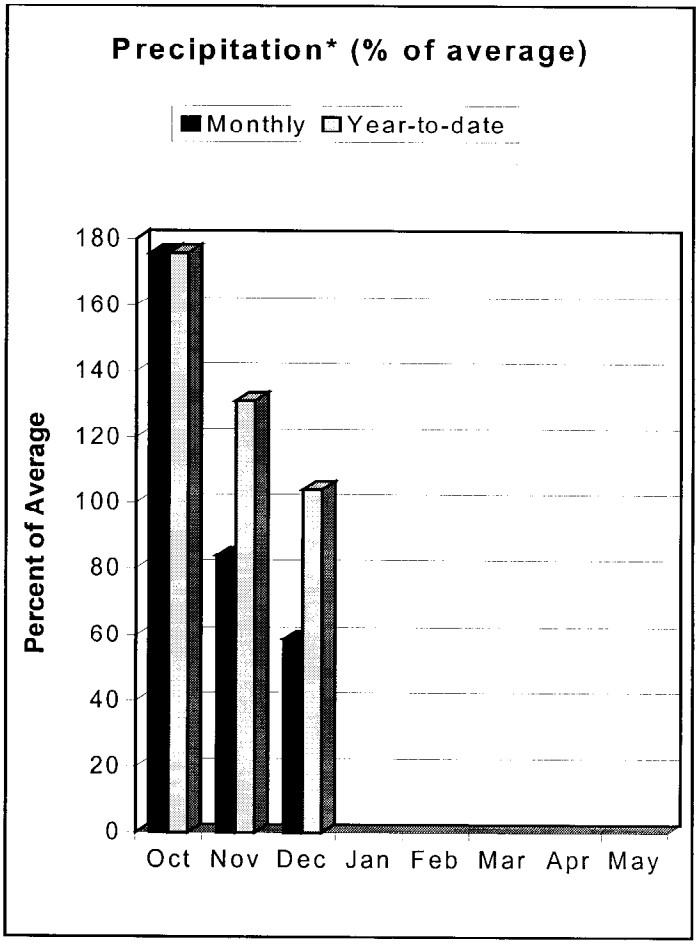
:) - The value is natural volume - actual volume may be affected by upstream water management.

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS as of January 1, 2001





*Based on selected stations

Although the snowpack accumulation in these basins was very promising through November, with percentages near 200% of average, extreme lack of snowfall in the later half of December has diminished the snowpack to below average accumulations on January 1. Combined measurements from the 16 SNOTEL sites throughout these basins indicate that the snowpack on January 1 is 93% of average. Most of these basins are above 90% of average with the exception of the San Miguel Basin, which is only 79% of average. Only 59% of average precipitation fell during December, and the water year total is now 104% of average. The combined reservoir storage level for 6 major reservoirs in these basins is only 77% of average for this time of year, which is only 66% of the storage last year at this time. Streamflow forecasts for this runoff season are highly variable depending on snowpack and precipitation conditions. They range from only 82% of average flow at the Inflow to Cone Reservoir, to 125% of average flow on the Mancos River near Mancos.

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS
Streamflow Forecasts - January 1, 2001

orecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding *					
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
olores River at Dolores	APR-JUL	151	210	250	102	290	349	246
cPhee Reservoir inflow	APR-JUL	176	244	290	103	336	404	283
an Miguel River nr Placerville	APR-JUL	73	101	120	98	139	167	122
urley Reservoir Intake	APR-JUL	6.2	12.0	16.0	88	20	26	18.2
	APRIL			2.50	125			2.00
	MAY			9.00	102			8.80
	JUNE			4.00	69			5.76
	JULY			0.50	31			1.64
one Reservoir Intake	APR-JUL	1.31	1.99	2.65	82	3.52	5.36	3.23
	APRIL			0.40	105			0.38
	MAY			1.50	87			1.72
	JUNE			0.65	71			0.91
	JULY			0.10	46			0.22
illylands Reservoir Intake	APR-JUL	0.95	1.59	2.40	86	4.40	7.34	2.79
	APRIL			0.40	111			0.36
	MAY			1.35	121			1.12
	JUNE			0.60	56			1.07
	JULY			0.05	21			0.24
io Blanco at Blanco Diversion	APR-JUL	32	46	55	102	64	78	54
avajo River at Oso Diversion	APR-JUL	31	51	65	100	79	99	65
an Juan River nr Carracus	APR-JUL	234	314	375	98	441	549	382
iedra River nr Arboles	APR-JUL	104	167	210	96	253	316	219
illecito Reservoir Inflow	APR-JUL	96	152	190	97	228	284	196
avajo Reservoir Inflow	APR-JUL	388	595	735	95	875	1082	772
iimas River at Durango	APR-JUL	219	342	425	102	508	631	418
emon Reservoir Inflow	APR-JUL	30	47	58	102	69	86	57
a Plata River at Hesperus	APR-JUL	17.6	25	30	125	35	42	24
ancos River nr Mancos	APR-JUL	22	39	50	125	61	78	40
	APRIL			9.00	155			5.80
	MAY			21	132			15.9
	JUNE			17.0	124			13.7
	JULY			3.00	65			4.60

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS
Reservoir Storage (1000 AF) - End of December

eservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
OUNDHOG	21.7	11.3	16.3	10.4
ACKSON GULCH	10.0	2.6	7.0	4.5
MON	40.0	9.8	30.0	19.4
PHEE	381.2	219.1	320.4	295.0
RRAGUINNEP	19.0	17.2	18.6	11.3
LLECITO	126.0	42.5	65.3	52.6

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS
Watershed Snowpack Analysis - January 1, 2001

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
ANIMAS RIVER BASIN	7	551	98
DOLORES RIVER BASIN	4	339	96
SAN MIGUEL RIVER BASIN	3	258	79
SAN JUAN RIVER BASIN	3	1432	92
TOTAL SAN MIGUEL, DOLORES AN JUAN RIVER BASINS	16	520	93

90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.
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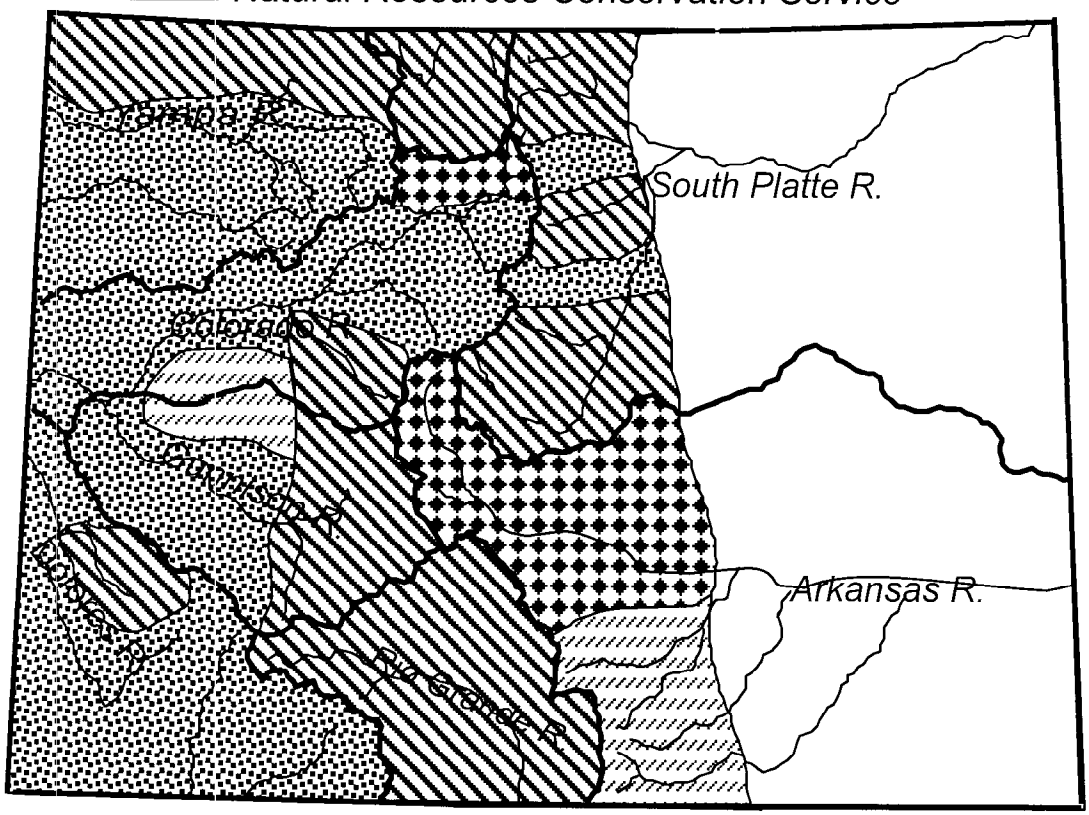
USDA

Natural Resources Conservation Service



Snowpack
January 1, 2001

Statewide: 91% of Average
203% of Last Year

- ***Much Above Average > 130%***
- ***Above Average 110% to 130%***
- ***Near Average 90% to 110%***
- ***Below Average 70% to 90%***
- ***Much Below Average < 70%***
- ***Not Measured***

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In addition to the basin outlook reports, water supply forecast information for the Western United States is available from the Natural Resources Conservation Service and the National Weather Service monthly, January through May. The information may be obtained from the National Resources Conservation Service web page at http://www.wcc.nrcs.usda.gov/water/quantity/westwide.html.

Issued by

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Colorado Basin Outlook Report

Natural Resources Conservation Service
Lakewood, CO